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(54) Title: A METHOD FOR PRODUCING MOTION AND FORCE BY CONTROLLING THE TWIN STRUCTURE ORIENTATION OF A MATERIAL AND ITS USES

(57) Abstract

The present invention refers to a method for obtaining shape changes, motion and/or force in a material having a twinned structure. According to the method, a sufficiently high external magnetic field applied to the material reorients the twin structure thereby producing motion/force. The operation is possible if the magnetocrystalline anisotropy energy is higher than or comparable to the energy of the reorientation of the twin structure to produce a certain strain.